

Appl. No. : 10/723,959
Filed : November 24, 2003

IN THE CLAIMS

Please amend Claims 12, 41, and 43, and cancel Claims 1-11, 19, 21, 23-27, 30-33, 38-40, and 45-46 without prejudice as follows:

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1. – 11. (Cancelled)

12. (Currently amended) Third party consumer premises equipment (CPE) adapted for use within a content-based network, said CPE comprising:

a plurality of proprietary and optional hardware features selected from the group

10 consisting comprising at least one of: [[(i)]] digital video recorder (DVR) features, [[and]] and/or [[(j)]] digital video interface (DVI) features;

a software application;

OpenCable (OCAP) compliant middleware adapted to communicate with said software application and said hardware features via a plurality of APIs; and

15 a hardware registry having a plurality of entries associated therewith and relating to respective ones of said hardware features;

wherein said CPE is further adapted to[[::]] download from said network and run said software application, said software application configured to: [[;]]

discover said hardware registry, said plurality of entries and said plurality of APIs;

20 access at least one of said proprietary and optional hardware features via at least one of said plurality of APIs; and

selectively control said at least one hardware feature using said application;

[[and]]

wherein said third party CPE is configured to be utilized within a multiple systems operator (MSO) network; and receive said software application

25 wherein said download of said software application configured to discover, access and selectively control comprises a via download from said network after installation of said CPE with a consumer premises.

13. (Previously presented) Apparatus adapted for operation within a cable network,

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said apparatus comprising:

a processor;

a storage device operatively coupled to said processor;

first software running on said processor and adapted to control at least one function

5 within said apparatus; and

at least one second software application running on said processor;

wherein said first software is configured to:

(a) maintain a registry of hardware options within said apparatus including storing data relating to said hardware options in said storage device; and

10 (b) provide access to said hardware options to said at least one second software application via a plurality of software interfaces; and

wherein said data relating to said hardware options comprises information regarding individual ones of said plurality of software interfaces which may be used to access individual ones of said hardware options.

15 14. (Original) The apparatus of Claim 13, further comprising a network interface operatively coupled to said processor;

wherein said first software is further adapted to communicate with an external entity via said interface.

20 15. (Original) The apparatus of Claim 13, wherein said processor comprises an embedded processor, and said storage device comprises an embedded memory.

16. (Original) The apparatus of Claim 13, wherein said storage device comprises a hard disk drive (HDD).

25 17. (Previously presented) The apparatus of Claim 13, wherein said network comprises a multi-channel distribution network of the hybrid fiber coax (HFC) type, and said at least one hardware option comprises digital video recorder (DVR) functionality.

18. (Previously presented) The apparatus of Claim 17, wherein said DVR functionality further comprises personal video recorder (PVR) functionality.

19. – 21. (Cancelled)

22. (Previously presented) A method of operating a cable network having a plurality of

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client devices operatively coupled thereto, the method comprising:

distributing at least one software application to each of said plurality of client devices;

providing at least one hardware registry within each of said client devices, said hardware registry containing data relating to a plurality of optional hardware associated with respective ones of said client devices;

5 providing at least one software interface within each of said client devices, said software interfaces being configured to interface between said at least one software application and at least one of said plurality of optional hardware;

running said at least one software application;

10 discovering said at least one hardware registry and said at least one software interface with said at least one software application, and

responsive to said discovering, controlling said at least one hardware option using said at least one software application and said at least one software interface.

23. – 33. (Cancelled)

15 34. (Previously presented) Digital video recorder (DVR)-enabled consumer premises equipment (CPE) for use in a content-based network, wherein said DVR functionality is provided according to the method comprising:

providing at least one hardware registry within said CPE, said hardware registry containing data relating to DVR hardware associated therewith;

20 providing at least one software interface within said CPE, said software interface being configured to interface between at least one software application running on said CPE and said DVR hardware;

running said at least one software application;

25 discovering said at least one hardware registry and software interface using at least said software application, and

responsive to said discovering, controlling said DVR hardware using said software application and said at least one software interface;

whereto said act of controlling comprises implementing one or more user-specified rules provided to said application relating to the playback of content from said DVR hardware.

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35. (Previously presented) The CPE of Claim 34, wherein said at least one software interface comprises an application programming interface (API).

36. (Original) The CPE of Claim 34, wherein said at least one software interface is associated with OCAP-compliant middleware running on said CPE, and said application 5 comprises a Java-based application adapted to make calls to objects within said middleware.

37. (Original) The CPE of Claim 36, wherein said registry comprises a database having records each with a plurality of fields and each relating to a specific one of a plurality of hardware options, said plurality of hardware options including said DVR hardware.

38. – 40. (Cancelled)

10 41. (Currently amended) A method of operating a consumer electronics device having middleware and a hard drive in data communication with said middleware, comprising: providing two or more applications adapted to run on said device and in conjunction with said middleware;

15 disposing a hardware registry having at least one digital video recorder (DVR) functionality record disposed therein, said at least one record further identifying at least one application programming interface (API) for interface with said DVR functionality; receiving contending requests for accessing said registry from said two or more applications;

20 resolving said contending requests, thereby enabling one of said two or more applications to access said registry at a time; and

controlling said DVR functionality via said at least one API so as to record at least a portion of content streamed to said device from an external source on said hard drive.

25 42. (Original) The method of Claim 41, wherein said act of accessing said registry comprises (i) discovering said registry; (ii) accessing said registry to identify said at least one DVR record; and (iii) accessing said at least one DVR record to identify said at least one API.

43. (Currently amended) In a cable network, a method of operating a consumer premises device having middleware, a hardware registry having a digital video recorder (DVR) functionality record identifying an application programming interface (API) for interface with said DVR functionality, and a hard drive in data communication with said middleware, the

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method comprising:

providing from said cable network a DVR-based application adapted to run on said device and in conjunction with said middleware;

accessing said registry using said application to identify said API; and

5 selectively controlling said DVR functionality via said API so as to store at least a portion of first entertainment content provided to said device on said hard drive for subsequent use by a consumer;

wherein said consumer premises device comprises a device not associated with said cable network, and said act of controlling is performed substantially by said cable network-provided
10 application.

44. (Original) The method of Claim 43, wherein said method further comprises simultaneously:

storing a second at least portion of second entertainment content on said hard drive; and

watching, via viewing apparatus operatively connected to said consumer premises device,
15 third entertainment content.

45. – 46. (Cancelled)